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## ABSTRACT

The preschools operated by the municipality of Reggio Emilia in Emilia Romagna, Italy, have drawn the attention of early childhood educators worldwide. This paper describes five features of these preschools. First, the educational philosophy of the schools is influenced by the high value accorded to cooperation in northern Italian culture; Bruner's concept of learning as a communal activity; and Issacs' concept of learning as active inquiry. Second, teachers are viewed as collaborators in a child's education, rather than as transmitters of knowledge, and there is frequent cooperation between teachers and parents concerning children's education. Third, the design of the preschools has incorporated aesthetically beautiful spaces, including spacious entryways, clean and decorated dining rooms, and well-supplied art areas. Fourth, great value is placed on arts and letters. Children's visual perception and aesthetic awareness are enhanced. Drawing is a daily occurrence. Teachers encourage children's communication through words and nonverbal means. Fifth, the preschools use the project approach to learning. Projects incorporate art, science, numbers, and words, and involve discussions, field experience, cultural exposure, and relating to the community at large. A list of 20 references is included. (BC)

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Impressions of Reggio Emilia

C & I 449

Independent Study

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### The Community of Reggio Emilia

In north central Italy, in the region known as Emilia Romagna, the city of Reggio Emilia is located thirty-five miles northwest of Bologna. The city of 130,000 people boasts rich farm land and a prosperous economy. The employment rate is higher than the national average-especially for women. In the 20-30 year age group, employed women outnumber employed men, and they work mainly in commerce, education, manufacturing and agriculture.

Reggio Emilia is a city of contrasts. Its technology is state of the art-but its surroundings are centuries old. Narrow cobblestone streets thread between old brick buildings with tile roofs. There are functioning shutters on unscreened windows. Tiny shops display high fashion merchandise charged to customers from high-tech cash registers while street vendors sell food, clothing, housewares and toys from carts in the open marketplace. Small restaurants serve a typical Bolognese cuisine while bars offer refreshments to customers who stand and sip cafe-con-latte, cappuccino or spirits. Beautiful old churches, tree-filled parks, a community theater and a municipal center are built on the edge of several piazzas-the place where people and pigeons gather. In one piazza-stately old stone lions keep a silent vigil. The streets are constantly busy as people on foot, on bicycles and in very small

automobiles share the same available space.

This is the city in which the preschools have caught the attention of early childhood educators from around the world. The municipality operates thirteen infant-toddler centers and twenty-two preschools serving about 47% of the children in the age range of birth through age six. Each of the schools is unique, reflecting the neighborhood in which it is located. But the schools in general practice a common philosophy and are built on a system of shared values and participation which make it unique in the field of early childhood education.

The schools had their beginning in the aftermath of the liberation of Italy from Germany and the end of World War II. A discarded tank found outside the city was sold for 500,000 lire-a large sum in 1945. It was decided to use the money to do something for the children-for peace (Rinaldi, 1991). Brick-by-brick, salvaged from the ruins of bombed buildings, they built the first school-- and idea-by-idea they decided what was to be taught in the school. As the community was rebuilding from the devastation of war, it was also building a partnership between parents, teachers and the community. The school was built in the ideas of patrimony-school as a right; school as a value; and school as an investment (Renaldi, 1991).

In 1963, the economic responsibility for the schools was taken over by the municipality. Fundamental to the

success of the schools is the ongoing dialogue between the administration, the educators and the parents.

Five features of the schools in Reggio Emilia will be described: educational philosophy; the adults: parents and staff; the environment; symbols: arts and letters; and projects.

### Philosophy

The educational philosophy of the schools has evolved through the years, partly from the dynamic partnership of staff, parents and educational advisors. Loris Malaguzzi, former director and long time educational leader of the programs, has played a key role in the development of the schools. Through his leadership and vision, they have drawn from some of the world's most thoughtful philosophers in education and psychology in developing their philosophy. In his remarks, he mentioned: John Dewey, David Hawkins, Susan Isaacs, Jean Piaget, Lev Vygotsky, Jerome Bruner, Erik Erickson, Sigmund Freud, Alfred Adler and others. For this paper, I attempted to review some of the writings of the theorists mentioned to bring perspective on what each one contributed to the development of the philosophy so well articulated and practiced in Reggio Emilia.

Much of what happens in the preschools reflects the overall philosophy of the staff and parents about children- about what the child is. Their view: the child-

...is rich  
...interactive  
...is able to exchange and communicate  
...is curious  
...has multiple competencies  
...has the capacity to amaze and be amazed  
...to wonder and be awed  
...is a natural researcher  
...is experiential  
...is unique and unrepeatable  
...is the carrier of rights  
...has many differences (and they are valued: race,  
cultures, language, gender)  
...is a resource: the greatest resource teachers have if  
they are able to listen  
...their potential is their many languages  
...has many relationships with adults and peers.

The children, in relationship with the teachers and parents and the other children, are the protagonist.

Another strong influence on the educational philosophy comes from within the northern Italian culture. The values of collaboration and cooperation are components of the predominant value of social participation and interdependence, and the communal aspects of life. The teachers view education as a social process in which children collaborate with children and with teachers as they

create knowledge together. In his book, Actual Minds, Possible Worlds, Jerome Bruner describes his own evolution from thinking that children learn by inventing while working alone, to describing a completion of that theory:

"...most learning in most settings is a communal activity, a sharing of the culture. The child must make knowledge his own, but in a community of those who share his sense of belonging to a culture. It is this that leads me to emphasize not only discovery and invention but the importance of negotiating and sharing...of joint culture creating as an object of schooling and as an appropriate step enroute to becoming a member of adult society". (Bruner, 1986 p. 127)

In her book Intellectual Growth in Young Children, (1928), Susan Isaacs describes the school for children from two to eight years old which she directed from 1924-27. The description of the school, the equipment and the educational aims are surprisingly similar to those described and observed in the schools in Reggio Emilia. Isaac's views reflects the influence of John Dewey and the value of learning by experience, and the importance of promoting active inquiry by the children themselves rather than "teaching" children. "To bring within their immediate experience every range of fact to which their interests reached out." (Isaacs, 1928 p. 17) The value in reading the works of Susan Isaacs is in the realization that what is receiving attention in the 1990's as exemplary education, was being practiced in the 1920's.

## The Adults: Staff and Parents

### Staff

The role of the adult in the educational life of the children is not that of "teacher as transmitter of knowledge", but as "collaborator" the teacher is a co-creator of knowledge. The teacher's role is to construct space and opportunities, materials and situations so that children can act with competence, and knowledge can be constructed.

The curriculum is not fixed in advance-teachers are not tied to a "train schedule". Rather, they see themselves as a "compass". The teacher enters the adventure of learning with the children.

Theirs is an education of listening rather than of talking; an education of doing and acting-by doing, one knows.

The adult is less like a bank where children can exchange things; the exchange between peers is valued just as much as the exchange between children and adults.

The staff consists of:

A Director who is responsible to the municipality for the overall operation of the schools,

Seven Pedagogists-who coordinate the educational aspects of the schools. They help teachers to reflect on what happens



during a day, and they help facilitate dialogue and discussion in a rich, full exchange between staff members. They have training equivalent to a four year University degree.

Teachers- two teachers work collaboratively with twenty-five children in homogeneous age groups. The teachers and the children remain together from age three to six. They have the equivalent of a high school education. Their role is to "educate and be educated", and maintain a reciprocal relationship between children, their environment and themselves. Much of their education occurs during weekly in-service programs which are led by the pedagogists. Loris Malaguzzi (1991): "What is important in the schools is that the teachers and adults talk...talk and discuss... and read. There needs to be a wide, rich exchange...The potentiality of this resource is an important moment of high culture. The fundamental point is that the teachers and adults reflect on what happens during the day, and the pedagogists facilitate the discussion. Many different trains of thought result from the discussions." A special teacher is assigned to each special needs child. Each school enrolls only one child who has special needs.

Atelierist- Each school has a person who has a degree in art. This art director works collaboratively with the teachers in supporting learning experiences. Symbolic representation is strongly valued as a way of learning and

as an expression of what has been learned. The role of the atelierist is to encourage children to express themselves through the language of the visual arts. The presence of the art director is not a common feature of preschools in Italy. It appears that only the schools in Reggio Emilia have made this commitment to the inclusion of this level of artistic expertise in preschools.

Auxiliary staff-cooks, cleaning staff and secretaries are considered to be educators. They are also included in the in-service programs and parent meetings. All the adults are valued as part of the educational experience.

#### Parents

Parents were the impetus, the instigators for establishing the schools in 1945. They wanted to make an investment for their children, and they decided to make that investment in preschool education.

Parents are valued as collaborators with the teachers. They are considered to be part of the educational plan of the schools. Staff invites, solicits and cultivates parents to share, discuss and give opinions.

This view varies from that described by Powell (1989), concerning child care staff preference for parent involvement in the U.S. which point to the desire for autonomy and support. Autonomy is described as a detachment from the lay public; "it is the professional not the client, who defines the presenting problem and

prescribes a remedy...". Support by parents is described in several ways: as responsiveness to staff suggestions and advice concerning center philosophy; as providers of information on a child's background and home life; as participants (defined by what the staff thinks is appropriate); and as advocates for the center. This may be reflective of the emphasis on individual autonomy valued by educators in the U.S. compared with the concept of family solidarity emphasized in the Italian culture (Edwards and Gandini, 1989). The program in Reggio Emilia is based on the theory of participation rather than on separation (Municipality of Reggio Emilia, 1990)

When explaining the role that parents play in the schools, the staff uses the word, expert. The meaning that the word, expert implies for them is that one has broad experience with something. "Parents have experience with their children and are therefore the expert on that child. The teachers need this expertise in knowing the child and helping him" (Rinaldi, 1991).

The educational level of most of the parents and that of the teachers is comparable-completion of high school. This gives another dimension of equality in the relationship of the parents and the teachers.

Although there is some cultural diversity in the community (Spanish influence from southern Italy, German influence from the north, and a recent influx if north

Africans), there is also an apparent homogeneity within the families and in the history and culture of the community. Staff did not indicate that they were serving any parents who are victims of the risk factors common to some families served by child care centers in the U.S. For example, there was no mention of families who were living in poverty, where a parent was incarcerated, abusing children or substances, illiterate or undereducated, or living as single parents.

Several examples of parent involvement were given. Each school has a consigliatore- a social organization or council with wide parent and community participation. Families contribute help to repair, maintain and construct school materials.

The school year begins with a parent-teacher meeting where first they talk about what happened during vacation and what they would like to do for the year. "Teachers bring their plans to the meeting but they don't plan all by themselves. Ideas from parents about experiences children have had at home or on holiday are included" (Filippini, 1991)

Collaboration and cooperation were terms used frequently by parents and teachers. They explained that these words belong to their history and tradition, and indeed, to their culture. "Collaboration is something that we need. Parents can bring another point of view...they help us see things in a different way...to exchange ideas

about a child" (Filippini, 1991).

Throughout the year, meetings are held after 9 p.m. and they sometimes last until past midnight. They discuss issues concerning how children learn, plans for children's parties, arguments about issues important during that year. A parent explained: "In moments of crisis we must cooperate with each other. For example with the war in Iraq. Children began drawing bombs, guns and other things they had been seeing on television. The teachers called a meeting for us to discuss and confront the situation. We would like it if we could always work together during conflict situations, so that we would all be giving our children the same information".

The value that the staff places on communication with families is also evident in special books which the staff prepare for each child. Photographs of each child engaged in activities depicting life at the school, plus written anecdotes are collected into individual books. By the end of a child's tenure at the school (usually three years), several scrapbooks document the child's early developmental and experiential history. These are presented as gifts to the parents.

#### Environments

David Hawkins (1974), in discussing the views of John Dewey, described the child's learning environment as a natural environment transformed and enriched by human

habitation. It is insufficient to think that children learn from things.

"There is no contact with things except through the medium of people. The things are saturated with the particular values which are put into them, not only by what people say about them, but more by what they do about them, and the way they show they feel about them and with them" (Hawkins, p. 167).

Thoughtfully designed, aesthetically beautiful spaces are a hallmark of the educational philosophy in the preschools of Reggio Emilia. Loris Malaguzzi describes the environment as follows:

"We value space because of its power to organize, promote pleasant relationships between people of different ages, create a handsome environment, provide changes, promote choices and activity, and its potential for sparking all kinds of social, affective, and cognitive learning. All this contributes to a sense of well-being and security in children." (Gandini, 1984)

The schools have been designed for children and adults to live comfortably together in a beautiful home-like environment. The environment is the third educator. Some of the features of the environments are:

- Healthy live plants thrive throughout the centers.
- An indoor courtyard, complete with trees, plants and birdhouses, surrounded by windows, brings the outside into the building. (Diana School)
- Infusion of sunlight into the environment. Large

window walls are prevalent. For example, standing at the front entrance to Diana school, one can look through to the outdoor playground behind the building.

- Entryways are designed to be spacious and full of sunlight- offering a welcome to parents and children on arrival. This space is used throughout the day as a meeting area or a large play area suitable for music and movement and other large muscle activities.
- Small spaces have been created throughout the centers which are nested within the larger small spaces.
- Housekeeping areas are set off by partial walls. Small furniture and attractively dressed, multicultural dolls, real dishes and pottery, linen tablecloths and napkins, and empty containers of food and cosmetics are carefully and attractively arranged.
- Cylindrical devices made of painted bendable metal are hinged and open outward. Costumes for dressing-up are neatly hung on hooks inside. These structures can be used as a "closet" for costumes or they can become another small space for play.
- In each school a separate area is provided for eating. In these dining rooms, meticulous attention to aesthetics has created a relaxed, home-like atmosphere in which the typical three course noon-time meal is enjoyed. Clean, crisp tablecloths and centerpieces grace the tables which seat four children. Real china

and glassware and cloth napkins and bibs are used. Wall decorations include collages of baskets or pictures, or shelves with interesting objects on display. Each center posts a menu in either words or pictures for the children's information. Although the teachers do not sit with the children during mealtimes, they were observed standing and supervising the lunch time activity.

- On almost all available wall surfaces, on small shelves, in doorways, along hallways, suspended from ceilings, in bathrooms, kitchens, and in stairwells, children's art is displayed, attractively, respectfully, and with artistic flair.
- Although children work with art media throughout the school, each program has a special room for art. The Atelier is the place where materials are not only attractively stored and displayed on open shelves, but where children assemble in small groups when working on specific projects. The rooms have easels, paint, markers and other media, containers of small objects for collage, objects found in the environment-shells, leaves, nuts, twigs, which can be looked at, played with, or used in the creation of a picture. Each atelier has a kiln for baking clay sculptures and a photographer's light board-to observe objects while a light source underlies them, a large sink, a drafting



table, and table and chairs for children to use. Some of them have skylights, one has a fenced, second story deck adjacent to it.

### Symbols: Arts and Letters

#### Art

When entering a preschool or an infant center in Reggio Emilia, one is immediately aware of the value placed on the children's art. The volume of art displayed and the variety of media are both indicators that the visual arts are a focus in the daily life of the centers.

- The walls are filled with children's drawings and paintings.
- Small shelves hold clay sculptures and three-dimensional structures made from wire, paper tubes and miscellaneous natural and man-made collage materials.
- Much of the displayed art is in the form of murals, representing the collaborative work of a group of children.

Frequently, posters are displayed which record the sequence of events which occurred during the development of a project. Examples of artistic representation are usually included. One such display involved the birth of kittens in the school. Photographs of the birth as well as photographs of clay sculptures of cats, were combined with drawings made by the children, and a written narrative of the event. Two of the kittens were still living at the school during our

visit.

The use of real experiences, combined with recording of the children's symbolic representations in drawing and in clay sculpture, is supported by cognitive psychologists in the discussion of the processes that link thinking, perceiving, knowing and expressing in the arts. In the words of Stanley Madeja in The Arts, Cognition and Basic Skills, the arts:

"provide a different way of viewing or knowing the world. If so, participation in the arts can serve to make explicit aspects of events that an individual in fact knew already but could not single out for attention or for future manipulation. This suggests that the arts can be a way of developing a sensitivity to the nuances of events, a sensitivity that can be reinforced by studying or actually making a work of art". (Madeja, 1977 p.14)

In another chapter of the same volume entitled, Phylogenetic and Ontogenetic Functions of Artistic Cognition, Mihaly Csikszentmihalyi wrote:

"It is mainly through art that individuals can share each other's lives and thereby expand their own experience while achieving a psychological integration with the species. It is mainly through art that we uncover and identify experiences that are not amenable to the specialized analysis of reason. In this sense art is at the forefront of our knowledge of the world." (p. 126)

These views appear to be similar to the philosophy which led to the decision in 1972 to include an art director

in each of preschools operated by the municipality of Reggio Emilia.

June McFee describes cognition as a function which includes both perceptual and conceptual information processing which can be expressed in pictorial or verbal symbols. Understanding is communicated through the symbols (McFee in Madeja, 1977).

James Gibson, a theorist in perception, believes that neonates have all the mechanisms necessary for perceiving their world. Instruction in the arts provides the context in which the refining of perceptual discriminations can happen. According to Gibson, the goal in arts education is to provide instruction that allows students to become discriminating about and sensitive to the visual, aural, and kinetic data gathered or received from art and to encourage them to analyze this data using aesthetic criteria.

In the preschools of Reggio Emilia, special attention is paid to the provision of experiences which enhance visual perception and aesthetic awareness. In the buildings which have been constructed or reconstructed to be used for children, efforts have been made to incorporate daylight, in the form of large window-walls or sky lights.

Colored film- cellophane, tinted vinyl, stained glass, mobiles and other media are frequently placed so that light dances through them, providing a unique visual experience.

Collage, paintings, weaving, mobiles and murals are

frequently made using transparent materials which are displayed in or near windows. As the sunlight radiates through them, perceptual diversity occurs and changes the overall visual effect of the art.

Strategic placement of mirrors at children's eye level- on walls, tabletops, in bathrooms and inside play houses, and even on the bricks outside the building- invites children to view themselves in relationship to the light and reflection surrounding them. Distorted mirrors-provide an alternative perception and an opportunity for humor.

A unique pyramid-shaped structure, constructed of poly-vinyl pipe and tinted plexiglass, is used as a special space for playing with small objects, or for just being alone.

A triangular shaped structure is lined on two sides with mirrors. Children can sit or lie down inside this small house.

Seating is available on the floor, on chairs and on carpeted stair-step structures. The steps provide yet another opportunity for perceiving the world from different vantage points. They also add a dimension of space, alternative seating, and a versatile play space.

When the children begin the study of a topic, such as in the case of the stone lions, they visited, looked at them from all angles, climbed on, made drawings, sculptured clay lions, made masks of lions, dramatized being a lion, read

and wrote stories, talked about, and looked at pictures of lions in the wild. The intricate drawings and clay sculptures which resulted, are characteristic of the unique artifacts produced by the children and reflect the enhanced perceptual experiences which they had during this project.

Drawing appears to be a daily occurrence in the lives of the children. But they do not just "do art projects". Often a teacher will coach a child, providing a model -not to duplicate, but to observe- and will encourage the child to look carefully at the object and suggest ways for the child to proceed.

Early childhood educators have long subscribed to "developmental" theories, influenced by Piaget's view of invariant stages, and by Kellogg, Goodnow, (1977) Lowenfeld and Brittan's (1970) beliefs in the developmental stage-theory of art. Most of the pictures done by infants and toddlers at Reggio Emilia show various progressions of Kellogg's stages of scribbling. A pictorial chart displayed in one of the centers compares the toddlers' drawings to Kellogg's scheme of stages. However, the products created by the preschool-aged children, although developmental, show a sophistication in form, line, design, the use of color and the realistic representation of observed objects, not typically seen in children's art in the U.S. The visitors in our delegation were amazed to observe the intricacy with which the children were drawing. In his remarks to us, Loris

Malaguzzi mentioned that the educational leadership at Reggio Emilia had been influenced by the works of Dr. David Hawkins. Hawkins believes that learning is not only something which happens as a result of development, but that development takes place within a framework which learning provides (Hawkins, 1974). Vygotsky's conception of the zone of proximal development (Bruner, 1986) also is based on the idea that learning and development are interdependent. The influence of these philosophers may have led to the decision to include an art director in each school. Having a person schooled in both the philosophy and principles of art, and knowledgeable about the philosophy of education and children espoused in the programs, has perhaps given them an opportunity to incorporate Hawkins' Vygotsky's and Bruner's theories of development-and-learning along with Madeja's and Csikszentmihalyi's, views on art and Gibson's views of perception, into practice. If this is the case, and the approach used at Reggio Emilia does enhance children's artistic abilities, then the strictly developmental view of art characteristic of American early childhood educators may, in fact, underestimate the potential artistic capability of children.

Although a detailed description of the methods used by the art directors was not provided during our visit, it appears that they use gentle coaching techniques when they work with the children, helping them to be more observant of

objects, and encouraging them to look at an object from several perspectives.

One teacher was observed working closely with a child who was trying to draw a picture of a small jack-in-the-box which was on the table in front of the child. The teacher held the small toy and pointed out its features to the child as he drew a likeness of the toy.

### Letters

Consistent with the current philosophy in early childhood that knowledge about letters and words should emerge in a holistic way as children develop the need to communicate by reading and writing, the teachers at Reggio Emilia believe that there are many ways to communicate. Words are not often enough. Communication can also occur through objects, through drawing and during dramatic play. Teachers are available to assist children who need help with writing. Children dictate to them, or invent their own words. Children also play with letter and word making materials, such as templates and block letters. Writing is often integrated with drawing as it is on the posters and charts the children and teachers create.

A study was conducted at Reggio Emilia to discover the different ways that children communicate.

Individual small boxes with their names and photographs on them were arranged on a wall for the children and adults to send and receive messages (gifts) to each other. They

sent small objects of friendship, folded paper, a drawing of a letter a child had learned, invitations to visit them in their homes.

Teachers observed and listened- asking children their ideas about messages, and looking at their messages to find out what the children knew about literacy. (They were careful to explain to the parents that they were not undertaking the kind of academic letter-instruction characteristic of the public school.)

Five and six year olds sent more elaborate messages than the three and four year olds, who first had to construct meaning for the word, message. They used all of the graphic forms they knew. They wanted to give something beautiful; to give pleasure to another. (Aesthetics) They sent paper collages, wadded-up paper, silvery and shiny paper, precious things, shapes, and photographs of themselves.

They liked to receive messages, but they learned that it was more important to please the receiver than to please themselves.

Among the findings of the study: teachers learned that more than 50% of the children already knew how to write their names; 50% of the boys who know how to write their names send messages, and 90% of the girls send messages even though they do not know how to write their names.



## Projects

One feature of the preschools which has attracted many educators is the use of child-initiated, collaborative, teacher-guided work involving long term projects. Drawing again on the philosophies of Dewey , Isaacs, Hawkins and others, active, experiential learning based on the child's interest in learning about a topic constitute a large part of the time children spend at the schools.

Katz and Chard (1989), define a project as "an in-depth study of a particular topic that one or more children undertake...and which extends over a period of days or weeks depending on the children's ages and the nature of the topic." (p. 2,3)

The project approach allows for flexible incorporation of a topic into an early childhood curriculum, while accommodating for the preferences, commitments and constraints of teachers and schools. Adults are encouraged to help children to interact with people, objects and the environment in ways that have personal meaning to them. It emphasizes active participation, relevance to the child's world, and collaboration. It is not surprising that when Lilian Katz first visited the preschools at Reggio Emilia she said, "I thought I had died and gone to Heaven" (Katz, 1990). For what she and Sylvia Chard describe in the book Engaging Children's Minds: The Project Approach (1989), had been going on there for a long time.

A project on space exploration was begun when a teacher placed a poster of the planets in her room. The children were attracted to it and sought to know more. Their interest led to the construction in the top-floor atelier of a large space station complete with planets suspended in space from the ceiling.

A project on the wild flower, poppies was in progress when we visited La Villetta School. The poppies bloom in early June. Several children brought poppies into school as gifts. Small groups visited a poppy field and picked some flowers to bring back to school. A temporary atelier was erected outdoors beneath a bright yellow canopy. Several easels and tables were set up. Vases of fresh cut poppies and other wild flowers were placed on the tables. A microscope was available for them to study the poppies closely. Children were painting large poppies at easels, or drawing them at the table. The atelierist worked with the small group of four or five children, guiding them and commenting on their work.

The project was more than an art activity. There was scientific study of the flower, much discussion, a field trip, and an opportunity to work together in small groups. The resulting dramatic paintings of poppies were impressive in themselves, but more so, when one knows that they were painted by four and five year old children.

A project involving writing, reading and communicating

with the community was described at the XXV Aprile School. The goal was to invite the community to participate in a Walk for the Environment. In phase one, there was a cognitive investigation in which the entire group was involved in a discussion of the concept of the walk, the importance of saving the environment, and why they wanted people to participate.

Three five year olds who knew how to copy and two who knew how to write began to plan in phase two. They discussed sending invitations, but realized they "did not know where all the people live, and it would take too many envelopes and too many stamps". Posters are an integral part of communication in their city. They are glued to walls and fences everywhere. After deciding to make a poster, they deliberated on the language they would use. They wanted to put pictures of trees and tell the people they wanted to defend nature. One plan was to write: "Stop where you are...and read this poster...We're going to defend nature... and "Close to that we'll put some trees. We also need the day. It's the 10th, no, the 9th...No, next Sunday..."

After deciding on the words, they asked the teacher to write the words so they could copy them. When they began printing, they discovered that their large letters of the first sentence filled the entire poster. The teachers had allowed them to make this mistake, and the children had the

emotional experience of deciding what words to take out. After many "drafts", much dialogue, and many "mistakes", the final poster was ready.

A project at Diana School involved the use of numbers. The teacher first explained to our group the school's philosophy on number. Numbers are an object familiar to the children- "the world is full of numbers-just like the world is full of letters". We encourage children to investigate the objects in their daily lives; to investigate the level of knowledge and understanding the child has reached by himself. They understand numerals- they know the number of their home. Weight-they hear of people being on diets, of weighing a certain amount. Distance- "I threw this rock farther than you". Size-each child wants an equal sized piece of cake. Time-they know what they do in the morning at 6:00; 8:00, etc.

Often the projects at Reggio Emilia begin with a problem. This one involved the construction of a rectangular table. The school requested that a retired carpenter who frequently volunteered at the school, help them build a table, and the children were to provide him with the measurements. They first drew the table, then measured it. They used their bodies to measure first - (using their bodies in relation to the object). Measuring with arms, open hands, fists, fingers, and then with objects-pencil, book. A child suggested they use string.

They first used long string for the long side and short string for the short side (called the string of shortness). They used their own measuring strips similar to measuring tapes, but each child had invented her own configuration of numbers and spaces. They also used footprints. Great debate ensued when it was discovered that the size of the shoe they used to draw the footprints was larger than the size of the foot of the owner of the shoe. Once the project of measuring was completed, a letter was written by the children in which they described the dimensions of the table and the specifications.

George Forman (1991) has described several common techniques which are involved in project work at the Reggio Emilia schools. They are:

1. Verbal outpouring. Discussions are held in which children and staff talk about what they think and know and desire to do with a topic.
2. Field experience. A trip to experience something related to the topic-visit to the poppy field, to the stone lions in the piazza, to a farm.
3. Drawing. Tell what you think you know by drawing.
4. Full-blown, uninterrupted exposure to a cultural artifact. Reconstruct gaps in the children's knowledge. For example, provide them with a tape measure to measure the table; visit a zoo to observe real lions.
5. Make their own version.

6. Voting. Social inspection of the symbols
7. Relate what goes on in the projects to the community at large.
8. Shift from drawing to notation. Move from the foot as a measurement tool to the use of conventional measuring tool. The power of notation is that it is conventional, portable, compact and contextual.
9. Cycles of symbolization. Draw; Experience; Re-Draw.  
"You have to know why your old theory is wrong before you can learn a new theory."

#### Concluding Remarks

The experience of seeing and hearing in person about the phenomenal program at Reggio Emilia, Italy has been a highlight of my professional career. The warmth of the hosts and the community members added to the enjoyment of the visit. The experience was not without frustration, however. The size and organization of the tour group placed some natural barriers on the extent of our ability to view the programs and the children at play for long enough blocks of time.

What appears to be happening in Reggio Emilia, is that a creative, committed and dynamic group of individuals have implemented the best known ideas and techniques in an environment in which aesthetics, socialization, collaboration, creativity, respect for humanity, and investment in children and families are the prevalent

values. What we saw and heard were not new ideas. They exist in quality preschools in the U.S. in varying degrees and in intermittent locations. (What happens in the municipality's 22 preschools and 13 infant centers is not generalized in all of Italy nor in all of Reggio Emilia, either).

What the schools in Reggio Emilia have accomplished is to bring together into a whole, the ideas of the best and the brightest philosophers and educators of this century. Added to that are strong values toward children and families, a work ethic based on collaboration and cooperation, and financial resources.

People frequently ask, "Can what happens in Reggio Emilia be replicated in the U.S.? A single yes or no response is inadequate. Yes, it would be possible to make environments for children into beautiful spaces, and to raise children's awareness of the elements and beauty of art. Research has shown that children exposed to specially prepared, aesthetically pleasing environments gained in measures of aesthetic quality of their artwork, levels of abstraction, concept formation and language development. (Feeney and Moravick, (1987)).

Teachers in the U.S. also facilitate learning through cooperative approaches and the development of projects; through constructivism, emergent literacy, and play.

Teachers also could work as partners with parents-after

all many teachers are also parents. A change in attitude and values on the part of some educators would be necessary for this to happen. Too many teachers subscribe to an isolationist philosophy for them to embrace parents as teachers do in Reggio Emilia. Change is possible. I do not know if it is probable.

The two staff positions which appear to make a difference in the Reggio Emilia schools-the pedagogist and the atelierist are not commonly found in American schools. It would be interesting to develop a pilot program to try out the use of these additional staff and find out whether similar programs would emerge.

Support for the teachers from the pedagogists in the form of feedback, discussions and in-service programs appear to be a key factor in teacher competence-not whether they have a degree or certification. This is an area worth investigating with those in higher education whose responsibility it is to train teachers. Perhaps we were on the right track when the Child Development Associate program was conceived, and in the Head Start model of staffing which includes an education coordinator, but adequate resources were not provided to really make them work.

The last component to mention is money. Child care programs are still struggling financially. Teachers earn minimum wages and often conduct their work life accordingly. Additional staff, space and furnishings would add costs to



the programs. Although child care may not yet be financially able to add staff, public school prekindergartens might be willing to experiment in this way. Perhaps there is a university laboratory school that could try to incorporate the best of the Reggio Emilia programs.

The preschools and infant centers we visited were wonderful. We can and should see more of the same in this country. The time has never been better.

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